

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-15 (cancelled).

Claim 16 (currently amended): A picture processing apparatus including a plurality of pixels, each pixel comprising:

a light receiving portion for generating an electric signal corresponding to an intensity of a received light;

an amplifying portion for amplifying the electric signal generated by the light receiving portion;

a plurality of storing portions, wherein each of the storing portions stores, as a current signal, the electric signal amplified by the amplifying portion;

a load portion for converting the current signal stored by each of the storing portions into a voltage signal;

a bias portion for supplying an offset current to an input of the load portion;

a calculating portion for calculating an output signal of the load portion based on the voltage signal converted by the load portion; and

an outputting portion for outputting a calculated result of the calculating portion.

Claim 17 (previously presented): The picture processing apparatus as claimed in claim 16, wherein the plurality of storing portions store current signals corresponding to the intensity of light received in different time periods, and wherein the calculating portion performs a calculating process using voltage signals from at least two different time periods based on current signals extracted from at least two of the plurality of storing portions.

Claim 18 (previously presented): The picture processing apparatus as claimed in claim 17, wherein the calculating process comprises at least one of addition, subtraction, and comparison.

Claim 19 (previously presented): The picture processing apparatus as claimed in claim 16, wherein the amplifying portion comprises a first mirror transistor and a second mirror transistor connected such that a gate electrode of the first mirror transistor faces a gate electrode of the second transistor, thereby amplifying the current signal based on current mirror amplification.

Claim 20 (previously presented): The picture processing apparatus as claimed in claim 16, wherein each of the storing portions includes a current copier circuit for storing the current signal.

Claim 21 (previously presented): The picture processing apparatus as claimed in claim 16, wherein the bias portion supplies an offset current to one of two current signals being compared by the calculating portion, the two current signals being supplied by two of the plurality of storage portions.

Claim 22 (previously presented): A plurality of pixels operable within a photographing device, the pixels arranged on a circuit in a matrix, for detecting a brightness of an object, each of the pixels comprising:

- a light receiving portion for generating an electric signal corresponding to an intensity of a received light;

- an amplifying portion for amplifying the electric signal generated by the light receiving portion;

- a plurality of storing portions, wherein each of the storing portions stores, as a current signal, the electric signal amplified by the amplifying portion;

- a load portion for converting the current signal stored by each of the storing portions into a voltage signal;

- a bias portion for supplying an offset current to an input of the load portion;

- a calculating portion for calculating an output signal of the load portion based on the voltage signal converted by the load portion; and

- an outputting portion for outputting a calculated result of the calculating portion.

Claim 23 (previously presented): The plurality of pixels as claimed in claim 22, wherein the plurality of storing portions store current signals corresponding to the intensity of light received in different time periods, and wherein the calculating portion performs a calculating process using voltage signals from at least two different time periods based on current signals extracted from at least two of the plurality of storing portions.

Claim 24 (previously presented): The plurality of pixels as claimed in claim 23, wherein the calculating process comprises at least one of addition, subtraction, and comparison.

Claim 25 (previously presented): The plurality of pixels as claimed in claim 22, wherein the amplifying portion comprises a first mirror transistor and a second mirror transistor connected such that a gate electrode of the first mirror transistor faces a gate electrode of the second transistor, thereby amplifying the current signal based on current mirror amplification.

Claim 26 (previously presented): The plurality of pixels as claimed in claim 22, wherein each of the storing portions includes a current copier circuit for storing the current signal.

Claim 27 (previously presented): The plurality of pixels as claimed in claim 22, wherein the bias portion supplies an offset current to one of two current signals being compared by the calculating portion, the two current signals being supplied by two of the plurality of storage portions.

Claim 28 (previously presented): A photographing device for detecting a brightness of an object, comprising:

a pixel area in which pixels are arranged in a matrix, each pixel comprising a light receiving portion for generating an electric signal corresponding to an intensity of a received light and an amplifying portion for amplifying the electric signal generated by the light receiving portion;

a second amplifying area in which second amplifying portions are arranged in each column of the matrix of the pixels in the pixel area, wherein each of the second amplifying portions amplifies a current signal based on current mirror amplification by a first mirror transistor and a second mirror transistor connected such that a gate electrode of the first mirror transistor faces a gate electrode of the second mirror transistor;

a pixel-outside storing area in which a plurality of storing portions are arranged in a matrix corresponding to the arrangement of the pixels in the pixel area, wherein each of the storing portions stores, as a current signal, the electric signal that has been amplified;

a load portion and calculating portion area in which a plurality of load portions and a plurality of calculating portions are arranged in each column of the matrix of the pixels of the pixel area, wherein each of the load portions converts the current signal of the corresponding storing portion into a voltage signal, and wherein each of the calculating portions performs a calculating process; and

an outputting portion area in which a plurality of outputting portions are arranged in each column of the matrix of the pixels of the pixel area, wherein each of the outputting portions outputs a calculated result of the corresponding calculating portion;

wherein the pixel area, the second amplifying portion area, the pixel-outside storing area, the load portion and calculating portion area, and the outputting portion area are disposed on a circuit.

Claim 29 (previously presented): The photographing device as claimed in claim 28, wherein the plurality of storing portions store current signals corresponding to the received light in different periods, and wherein the calculating portion performs a calculating process using

voltage signals based on current signals extracted from at least two of the plurality of storing portions.

Claim 30 (previously presented): The picture processing apparatus as claimed in claim 29, wherein the calculating process comprises at least one of addition, subtraction, and comparison.

Claim 31 (previously presented): The photographing device as claimed in claim 28, further comprising a bias portion for adding an offset current to the current signal stored by each of the storing portions.

Claim 32 (previously presented): The photographing device as claimed in claim 31, wherein the bias portion supplies an offset current to one of two current signals being compared by the calculating portion, the two current signals being supplied by two of the plurality of storage portions.

Claim 33 (previously presented): The photographing device as claimed in claim 28, wherein each of the storing portions includes a current copier circuit for storing the current signal.